

Table S1. Specimens included into the prospective and archived study per clinical site.

	Prospective Study	Archived Study	Total
Royal Oak, MI	150	165	315 (22.4%)
Chicago, IL	171	79	250 (17.8%)
Rochester, MN	152	58	210 (14.9%)
New York, NY	163	3	166 (11.8%)
Los Angeles, CA	118	8	126 (8.9%)
Akron, OH	104	15	119 (8.5%)
Baltimore, MA	81	3	84 (6.0%)
Seattle, WA	57	12	69 (4.9%)
Milwaukee, WI	0	26	26 (1.8%)
Rochester, NY	20	4	24 (1.7%)
Chapel Hill, NC	0	19	19 (1.3%)
total	1,016	392	1,408

Table S2. Study subject demographics.

		Prospective Study	Archived Study
Sex	Male	598	198
	Female	418	122
	Not reported ^a	-	72
Age	18-30 years	69	18
	31-60 years	367	106
	>60 years	580	190
	Not reported ^a	-	78
Clinical Setting	Intensive care unit	505	112
	Hospital ward	511	101
	Inpatient ^b	-	69
	Outpatient	-	32
Not reported ^a		-	78
Total		1,016	392

^aFor the archived study, demographic information was not available for all specimens.

^bHospital ward/intensive care unit not specified.

Table S3. Oropharyngeal flora (A) and off-panel organisms (B) reported by SoC for 1,016 prospective specimens.

A

Oropharyngeal Flora Reported by SoC	
Present	418/1,016 (41.1%)
Not Present	575/1,016 (56.6%)
Not Reported	23/1,016 (2.3%)

B

Reported Off-Panel Organisms	
Bacteria	
<i>Achromobacter</i> species	3
<i>Alcaligines</i> species	2
<i>Bordetella bronchiseptica</i>	2
<i>Burkholderia cepacia</i>	2
<i>Chryseobacterium gleum</i>	1
<i>Citrobacter koseri</i>	6
<i>Corynebacterium</i> species	9
<i>Corynebacterium amycolatum</i>	1
<i>Corynebacterium propinquum</i>	1
<i>Corynebacterium pseudodiphtheriticum</i>	1
<i>Corynebacterium striatum</i>	1
diphtheroids	2
<i>Eikenella corrodens</i>	1
<i>Enterococcus</i> species	3
<i>Enterococcus faecalis</i>	3
<i>Enterococcus faecium</i>	1
<i>Haemophilus parainfluenzae</i>	1
<i>Klebsiella aerogenes</i>	9
<i>Lactobacillus</i> species	2
<i>Mycobacterium abcessus/cheloneae</i> group	3
<i>Mycobacterium avium</i>	2
<i>Mycobacterium gordonaiae</i>	1
<i>Mycobacterium kansasii</i>	1
<i>Mycobacterium mucogenicum</i>	2
<i>Neisseria</i> species	3
<i>Nocardia cyriacigeorgica</i>	1
<i>Pantoea agglomerans</i>	1

Pasteurella multocida

1

Providencia rettgeri

1

Providencia stuartii

2

Ralstonia species

1

Raoultella species

1

Raoultella planticola

1

Serratia liquefaciens

1

coagulase-negative
staphylococci

19

 α -haemolytic streptococci

23

 β -haemolytic streptococci

3

Streptococcus anginosus

1

Streptococcus agalactiae

2

Streptococcus pyogenes

1

Yeast*Candida* species

146

yeast

29

Fungi*Acrodontium* species

1

Acremonium species

1

Actinomyces odontolyticus

2

Aspergillus species

13

basidiomycetes

2

Cladosporidium species

3

Cryptococcus species

3

Gloeoporus species

1

Histoplasma capsulatum

1

mold

1

Mucor species

1

Penicillium species

10

Phlebia species

1

Pseudallescheria boydii

1

Rhinocladiella species

1

Saccharomyces cerevisiae

2

Streptomyces species

1

Table S4. Comparison of SoC and Unyvero panel results for the prospective study arm.

Unyvero Result	SoC Result	Additional SoC Results for Off-Panel Organisms^a	# Cases	%
(A) Concordant Results			774	76.2%
Unyvero and SoC negative			635	62.5%
negative	negative	-	601	
negative	negative	<i>Achromobacter denitrificans</i>	1	
negative	negative	<i>Alcaligines</i> species	1	
negative	negative	<i>Bordetella bronchiseptica</i>	2	
negative	negative	<i>Chryseobacterium gleum,</i> <i>Mycobacterium chelonae</i>	1	
negative	negative	<i>Citrobacter koseri</i>	2	
negative	negative	<i>Corynebacterium pseudodiphtheriticum</i>	1	
negative	negative	<i>Corynebacterium species</i>	4	
negative	negative	<i>Eikenella corrodens</i>	1	
negative	negative	<i>Klebsiella aerogenes</i>	6	
negative	negative	<i>Enterococcus faecalis</i>	1	
negative	negative	<i>Enterococcus species</i>	1	
negative	negative	<i>Haemophilus parainfluenzae</i>	1	
negative	negative	<i>Lactobacillus</i> species	2	
negative	negative	<i>Mycobacterium abscessus</i>	1	
negative	negative	<i>Mycobacterium avium</i>	1	
negative	negative	<i>Mycobacterium gordoniæ,</i> <i>Mycobacterium abscessus,</i> <i>Mycobacterium mucogenicum</i>	1	
negative	negative	<i>Mycobacterium mucogenicum</i>	1	
negative	negative	<i>Neisseria</i> species	2	
negative	negative	<i>Nocardia cyriacigeorgica</i>	1	
negative	negative	<i>Serratia liquefaciens</i>	1	
negative	negative	<i>Streptococcus agalactiae,</i> <i>Streptococcus anginosus</i>	1	
negative	negative	β-haemolytic streptococci	1	
Unyvero and SoC Positive			139	13.7%
<i>Acinetobacter</i> species	<i>Acinetobacter</i> species	-	3	
<i>Acinetobacter</i> species	<i>Acinetobacter</i> species	<i>Corynebacterium</i> species	1	
<i>Enterobacter cloacae</i> complex	<i>Enterobacter cloacae</i> complex	-	4	
<i>Escherichia coli</i>	<i>Escherichia coli</i>	-	9	
<i>Escherichia coli</i>	<i>Escherichia coli</i>	<i>Enteroccus</i> species, <i>Raoultella planticola</i>	1	
<i>Haemophilus influenzae</i>	<i>Haemophilus influenzae</i>	-	5	
<i>Klebsiella pneumoniae</i>	<i>Klebsiella pneumoniae</i>	-	6	
<i>Moraxella catarrhalis</i>	<i>Moraxella catarrhalis</i>	-	1	
<i>Pneumocystis jirovecii</i>	<i>Pneumocystis jirovecii</i>	-	5	
<i>Pseudomonas aeruginosa</i>	<i>Pseudomonas aeruginosa</i>	-	28	
<i>Pseudomonas aeruginosa</i>	<i>Pseudomonas aeruginosa</i>	<i>Klebsiella aerogenes</i>	1	
<i>Pseudomonas aeruginosa</i>	<i>Pseudomonas aeruginosa</i>	<i>Pasteurella multocida</i>	1	
<i>Pseudomonas aeruginosa</i>	<i>Pseudomonas aeruginosa</i>	<i>Providencia rettgeri</i>	1	
<i>Serratia marcescens</i>	<i>Serratia marcescens</i>	-	3	
<i>Serratia marcescens</i>	<i>Serratia marcescens</i>	<i>Burkholderia cepacia</i>	1	
<i>Serratia marcescens</i>	<i>Serratia marcescens</i>	<i>Klebsiella aerogenes</i>	1	
<i>Staphylococcus aureus</i>	<i>Staphylococcus aureus</i>	-	35	
<i>Staphylococcus aureus</i>	<i>Staphylococcus aureus</i>	<i>Corynebacterium</i> species	2	

Unyvero Result	SoC Result	Additional SoC Results for Off-Panel Organisms ^a	# Cases	%
<i>Staphylococcus aureus</i>	<i>Staphylococcus aureus</i>	β-haemolytic streptococci	1	
<i>Staphylococcus aureus</i>	<i>Staphylococcus aureus</i>	<i>Streptococcus pyogenes</i>	1	
<i>Stenotrophomonas maltophilia</i>	<i>Stenotrophomonas maltophilia</i>	-	7	
<i>Stenotrophomonas maltophilia</i>	<i>Stenotrophomonas maltophilia</i>	<i>Burkholderia cepacia</i>	1	
<i>Streptococcus pneumoniae</i>	<i>Streptococcus pneumoniae</i>	-	1	
Acinetobacter species, <i>Citrobacter freundii</i>	Acinetobacter species, <i>Citrobacter freundii</i>	-	1	
Acinetobacter species, <i>Stenotrophomonas maltophilia</i>	Acinetobacter species, <i>Stenotrophomonas maltophilia</i>	<i>Corynebacterium amycolatum</i>	1	
Enterobacter cloacae complex, <i>Staphylococcus aureus</i>	Enterobacter cloacae complex, <i>Staphylococcus aureus</i>	-	1	
<i>Escherichia coli</i> , <i>Klebsiella oxytoca</i>	<i>Escherichia coli</i> , <i>Klebsiella oxytoca</i>	-	1	
<i>Klebsiella oxytoca</i> , <i>Staphylococcus aureus</i>	<i>Klebsiella oxytoca</i> , <i>Staphylococcus aureus</i>	<i>Citrobacter koseri</i>	1	
<i>Klebsiella pneumoniae</i> , <i>Pseudomonas aeruginosa</i>	<i>Klebsiella pneumoniae</i> , <i>Pseudomonas aeruginosa</i>	-	1	
Proteus species, <i>Pseudomonas aeruginosa</i>	Proteus species, <i>Pseudomonas aeruginosa</i>	-	1	
<i>Pseudomonas aeruginosa</i> , <i>Staphylococcus aureus</i>	<i>Pseudomonas aeruginosa</i> , <i>Staphylococcus aureus</i>	-	5	
<i>Pseudomonas aeruginosa</i> , <i>Stenotrophomonas maltophilia</i>	<i>Pseudomonas aeruginosa</i> , <i>Stenotrophomonas maltophilia</i>	-	3	
<i>Serratia marcescens</i> , <i>Staphylococcus aureus</i>	<i>Serratia marcescens</i> , <i>Staphylococcus aureus</i>	<i>Enterococcus faecalis</i>	1	
<i>Staphylococcus aureus</i> , <i>Stenotrophomonas maltophilia</i>	<i>Staphylococcus aureus</i> , <i>Stenotrophomonas maltophilia</i>	-	3	
Proteus species, <i>Pseudomonas aeruginosa</i> , <i>Staphylococcus aureus</i>	Proteus species, <i>Pseudomonas aeruginosa</i> , <i>Staphylococcus aureus</i>	-	1	

Unyvero Result	SoC Result	Additional SoC Results for Off-Panel Organisms ^a	# Cases	%
(B) Discordant Results			242	23.8%
Unyvero Detection of Additional Microorganisms			214	21.1%
a) Unyvero Positive, SoC Negative			151	14.9%
<i>Acinetobacter</i> species	negative	-	2	
<i>Acinetobacter</i> species	negative	<i>Klebsiella aerogenes</i>	1	
<i>Citrobacter freundii</i>	negative	<i>Citrobacter koseri</i>	1	
<i>Enterobacter cloacae</i> complex	negative	-	3	
<i>Enterobacter cloacae</i> complex	negative	<i>Citrobacter koseri</i>	1	
<i>Escherichia coli</i>	negative	-	14	
<i>Haemophilus influenzae</i>	negative	-	22	
<i>Haemophilus influenzae</i>	negative	<i>Pantoea agglomerans</i>	1	
<i>Haemophilus influenzae</i>	negative	β-haemolytic streptococci	1	
<i>Klebsiella oxytoca</i>	negative	-	2	
<i>Klebsiella pneumoniae</i>	negative	-	3	
<i>Legionella pneumophila</i>	negative	-	1	
<i>Moraxella catarrhalis</i>	negative	-	2	
<i>Moraxella catarrhalis</i>	negative	<i>Streptococcus agalactiae</i>	1	
<i>Mycoplasma pneumoniae</i>	negative	-	4	
<i>Pneumocystis jirovecii</i>	negative	-	8	

Unyvero Result	SoC Result	Additional SoC Results for Off-Panel Organisms ^a	# Cases	%
<i>Pneumocystis jirovecii</i>	negative	<i>Corynebacterium propinquum</i>	1	
<i>Pseudomonas aeruginosa</i>	negative	-	25	
<i>Pseudomonas aeruginosa</i>	negative	<i>Achromobacter xylosoxidans</i>	1	
<i>Pseudomonas aeruginosa</i>	negative	<i>Alcaligenes</i> species <i>Achromobacter xylosoxidans</i> , <i>Ralstonia</i> species	1	
<i>Staphylococcus aureus</i>	negative	-	20	
<i>Staphylococcus aureus</i>	negative	<i>Mycobacterium kansasii</i>	1	
<i>Stenotrophomonas maltophilia</i>	negative	-	2	
<i>Streptococcus pneumoniae</i>	negative	-	6	
<i>Enterobacter cloacae</i> complex, <i>Staphylococcus aureus</i>	negative	-	1	
<i>Escherichia coli</i> , <i>Klebsiella pneumoniae</i>	negative	-	1	
<i>Escherichia coli</i> , <i>Serratia marcescens</i>	negative	-	1	
<i>Haemophilus influenzae</i> , <i>Moraxella catarrhalis</i>	negative	-	3	
<i>Haemophilus influenzae</i> , <i>Mycoplasma pneumoniae</i>	negative	-	1	
<i>Haemophilus influenzae</i> , <i>Staphylococcus aureus</i>	negative	-	1	
<i>Haemophilus influenzae</i> , <i>Streptococcus pneumoniae</i>	negative	-	3	
<i>Klebsiella oxytoca</i> , <i>Proteus</i> species	negative	-	1	
<i>Klebsiella pneumoniae</i> , <i>Staphylococcus aureus</i>	negative	-	1	
<i>Moraxella catarrhalis</i> , <i>Pneumocystis jirovecii</i>	negative	-	1	
<i>Moraxella catarrhalis</i> , <i>Streptococcus pneumoniae</i>	negative	-	1	
<i>Pneumocystis jirovecii</i> , <i>Staphylococcus aureus</i>	negative	-	1	
<i>Pseudomonas aeruginosa</i> , <i>Staphylococcus aureus</i>	negative	-	5	
<i>Pseudomonas aeruginosa</i> , <i>Staphylococcus aureus</i>	negative	<i>Mycobacterium avium</i>	1	
<i>Staphylococcus aureus</i> , <i>Stenotrophomonas maltophilia</i>	negative	-	1	
<i>Enterobacter cloacae</i> complex, <i>Haemophilus influenzae</i> , <i>Moraxella catarrhalis</i>	negative	-	1	
<i>Escherichia coli</i> , <i>Haemophilus influenzae</i> , <i>Staphylococcus aureus</i>	negative	-	1	
<i>Klebsiella oxytoca</i> , <i>Pseudomonas aeruginosa</i> , <i>Staphylococcus aureus</i>	negative	-	1	
<i>Enterobacter cloacae</i> complex, <i>Haemophilus influenzae</i> , <i>Moraxella catarrhalis</i> , <i>Morganella morganii</i> , <i>Staphylococcus aureus</i> , <i>Stenotrophomonas maltophilia</i>	negative	-	1	
b) Unyvero and SoC Positive (Partially Concordant)			63	6.2%
<i>Acinetobacter</i> species, <i>Klebsiella pneumoniae</i>	<i>Klebsiella pneumoniae</i>	-	1	

Unyvero Result	SoC Result	Additional SoC Results for Off-Panel Organisms ^a	# Cases	%
<i>Acinetobacter</i> species, <i>Pseudomonas aeruginosa</i>	<i>Pseudomonas aeruginosa</i>	-	1	
<i>Enterobacter cloacae</i> complex, <i>Mycoplasma pneumoniae</i>	<i>Enterobacter cloacae</i> complex	-	1	
<i>Escherichia coli</i> , <i>Haemophilus influenzae</i>	<i>Escherichia coli</i>	-	1	
<i>Escherichia coli</i> , <i>Pseudomonas aeruginosa</i>	<i>Pseudomonas aeruginosa</i>	-	1	
<i>Escherichia coli</i> , <i>Serratia marcescens</i>	<i>Escherichia coli</i>	-	1	
<i>Escherichia coli</i> , <i>Staphylococcus aureus</i>	<i>Escherichia coli</i>	<i>Corynebacterium striatum</i> , <i>Providencia stuartii</i>	1	
<i>Escherichia coli</i> , <i>Staphylococcus aureus</i>	<i>Staphylococcus aureus</i>	-	1	
<i>Haemophilus influenzae</i> , <i>Klebsiella oxytoca</i>	<i>Klebsiella oxytoca</i>	<i>Citrobacter koseri</i>	1	
<i>Haemophilus influenzae</i> , <i>Moraxella catarrhalis</i>	<i>Haemophilus influenzae</i>	<i>Neisseria</i> species	1	
<i>Haemophilus influenzae</i> , <i>Pseudomonas aeruginosa</i>	<i>Pseudomonas aeruginosa</i>	-	3	
<i>Haemophilus influenzae</i> , <i>Staphylococcus aureus</i>	<i>Haemophilus influenzae</i>	-	1	
<i>Haemophilus influenzae</i> , <i>Staphylococcus aureus</i>	<i>Staphylococcus aureus</i>	-	2	
<i>Klebsiella oxytoca</i> , <i>Klebsiella pneumoniae</i>	<i>Klebsiella pneumoniae</i>	-	1	
<i>Klebsiella oxytoca</i> , <i>Serratia marcescens</i>	<i>Klebsiella oxytoca</i>	-	1	
<i>Klebsiella oxytoca</i> , <i>Stenotrophomonas maltophilia</i>	<i>Klebsiella oxytoca</i>	-	1	
<i>Klebsiella pneumoniae</i> , <i>Pseudomonas aeruginosa</i>	<i>Klebsiella pneumoniae</i>	-	1	
<i>Klebsiella pneumoniae</i> , <i>Staphylococcus aureus</i>	<i>Klebsiella pneumoniae</i>	<i>Corynebacterium</i> species	1	
<i>Klebsiella pneumoniae</i> , <i>Staphylococcus aureus</i>	<i>Staphylococcus aureus</i>	-	1	
<i>Pneumocystis jirovecii</i> , <i>Pseudomonas aeruginosa</i>	<i>Pseudomonas aeruginosa</i>	-	1	
<i>Pneumocystis jirovecii</i> , <i>Stenotrophomonas maltophilia</i>	<i>Stenotrophomonas maltophilia</i>	-	2	
<i>Proteus</i> species, <i>Staphylococcus aureus</i>	<i>Proteus</i> species	-	1	
<i>Pseudomonas aeruginosa</i> , <i>Serratia marcescens</i>	<i>Pseudomonas aeruginosa</i>	-	1	
<i>Pseudomonas aeruginosa</i> , <i>Staphylococcus aureus</i>	<i>Pseudomonas aeruginosa</i>	-	1	
<i>Pseudomonas aeruginosa</i> , <i>Staphylococcus aureus</i>	<i>Staphylococcus aureus</i>	-	2	
<i>Pseudomonas aeruginosa</i> , <i>Stenotrophomonas maltophilia</i>	<i>Pseudomonas aeruginosa</i>	-	3	
<i>Staphylococcus aureus</i> , <i>Stenotrophomonas maltophilia</i>	<i>Staphylococcus aureus</i>	-	1	
<i>Acinetobacter</i> species, <i>Klebsiella pneumoniae</i> , <i>Staphylococcus aureus</i>	<i>Klebsiella pneumoniae</i> , <i>Staphylococcus aureus</i>	-	1	
<i>Acinetobacter</i> species, <i>Klebsiella pneumoniae</i> , <i>Stenotrophomonas maltophilia</i>	<i>Klebsiella pneumoniae</i>	-	1	

Unyvero Result	SoC Result	Additional SoC Results for Off-Panel Organisms ^a	# Cases	%
<i>Acinetobacter</i> species, <i>Pseudomonas aeruginosa</i> , <i>Stenotrophomonas maltophilia</i>	<i>Acinetobacter</i> species, <i>Pseudomonas aeruginosa</i>	-	1	
<i>Enterobacter cloacae</i> complex, <i>Klebsiella pneumoniae</i> , <i>Moraxella catarrhalis</i>	<i>Enterobacter cloacae</i> complex	-	1	
<i>Enterobacter cloacae</i> complex, <i>Klebsiella pneumoniae</i> , <i>Pseudomonas aeruginosa</i>	<i>Enterobacter cloacae</i> complex	-	1	
<i>Escherichia coli</i> , <i>Morganella morganii</i> , <i>Pseudomonas aeruginosa</i>	<i>Pseudomonas aeruginosa</i>	-	1	
<i>Escherichia coli</i> , <i>Pneumocystis jirovecii</i> , <i>Pseudomonas aeruginosa</i>	<i>Escherichia coli</i>	-	1	
<i>Escherichia coli</i> , <i>Pseudomonas aeruginosa</i> , <i>Serratia marcescens</i>	<i>Pseudomonas aeruginosa</i> , <i>Serratia marcescens</i>	-	1	
<i>Escherichia coli</i> , <i>Pseudomonas aeruginosa</i> , <i>Staphylococcus aureus</i>	<i>Staphylococcus aureus</i>	-	1	
<i>Haemophilus influenzae</i> , <i>Moraxella catarrhalis</i> , <i>Streptococcus pneumoniae</i>	<i>Moraxella catarrhalis</i> , <i>Streptococcus pneumoniae</i>	-	1	
<i>Klebsiella oxytoca</i> , <i>Pseudomonas aeruginosa</i> , <i>Stenotrophomonas maltophilia</i>	<i>Pseudomonas aeruginosa</i>	-	1	
<i>Klebsiella pneumoniae</i> , <i>Pseudomonas aeruginosa</i> , <i>Stenotrophomonas maltophilia</i>	<i>Klebsiella pneumoniae</i> , <i>Pseudomonas aeruginosa</i>	-	1	
<i>Pseudomonas aeruginosa</i> , <i>Serratia marcescens</i> , <i>Stenotrophomonas maltophilia</i>	<i>Pseudomonas aeruginosa</i>	-	1	
<i>Pseudomonas aeruginosa</i> , <i>Serratia marcescens</i> , <i>Stenotrophomonas maltophilia</i>	<i>Pseudomonas aeruginosa</i> , <i>Serratia marcescens</i>	-	1	
<i>Acinetobacter</i> species, <i>Escherichia coli</i> , <i>Klebsiella pneumoniae</i> , <i>Pseudomonas aeruginosa</i>	<i>Klebsiella pneumoniae</i> , <i>Pseudomonas aeruginosa</i>	<i>Enterococcus faecium</i>	1	
<i>Acinetobacter</i> species, <i>Escherichia coli</i> , <i>Klebsiella pneumoniae</i> , <i>Stenotrophomonas maltophilia</i>	<i>Acinetobacter</i> species	-	1	
<i>Acinetobacter</i> species, <i>Escherichia coli</i> , <i>Proteus</i> species, <i>Pseudomonas aeruginosa</i>	<i>Pseudomonas aeruginosa</i>	-	1	
<i>Enterobacter cloacae</i> complex, <i>Escherichia coli</i> , <i>Klebsiella oxytoca</i> , <i>Stenotrophomonas maltophilia</i>	<i>Enterobacter cloacae</i> complex, <i>Escherichia coli</i> , <i>Klebsiella oxytoca</i>	-	1	
<i>Escherichia coli</i> , <i>Haemophilus influenzae</i> , <i>Pneumocystis jirovecii</i> , <i>Staphylococcus aureus</i>	<i>Staphylococcus aureus</i>	-	1	
<i>Haemophilus influenzae</i> , <i>Proteus</i> species, <i>Pseudomonas aeruginosa</i> , <i>Stenotrophomonas maltophilia</i>	<i>Pseudomonas aeruginosa</i>	-	1	

Unyvero Result	SoC Result	Additional SoC Results for Off-Panel Organisms ^a	# Cases	%
<i>Pseudomonas aeruginosa</i> , <i>Serratia marcescens</i> , <i>Staphylococcus aureus</i> , <i>Stenotrophomonas maltophilia</i>	<i>Pseudomonas aeruginosa</i> , <i>Serratia marcescens</i> , <i>Staphylococcus aureus</i>	-	1	
<i>Acinetobacter</i> species, <i>Enterobacter cloacae</i> complex, <i>Haemophilus influenzae</i> , <i>Klebsiella pneumoniae</i> , <i>Streptococcus pneumoniae</i>	<i>Enterobacter cloacae</i> complex, <i>Klebsiella pneumoniae</i> , <i>Streptococcus pneumoniae</i>	-	1	
<i>Citrobacter freundii</i> , <i>Escherichia coli</i> , <i>Klebsiella pneumoniae</i> , <i>Pseudomonas aeruginosa</i> , <i>Serratia marcescens</i>	<i>Escherichia coli</i> , <i>Klebsiella pneumoniae</i> , <i>Pseudomonas aeruginosa</i> , <i>Serratia marcescens</i>	-	1	
<i>Enterobacter cloacae</i> complex, <i>Escherichia coli</i> , <i>Klebsiella oxytoca</i> , <i>Klebsiella variicola</i> , <i>Proteus</i> species	<i>Enterobacter cloacae</i> complex	-	1	
<i>Escherichia coli</i> , <i>Klebsiella pneumoniae</i> , <i>Pseudomonas aeruginosa</i> , <i>Serratia marcescens</i> , <i>Stenotrophomonas maltophilia</i>	<i>Klebsiella pneumoniae</i> , <i>Pseudomonas aeruginosa</i> , <i>Serratia marcescens</i> , <i>Stenotrophomonas maltophilia</i>	<i>Corynebacterium</i> species	1	
<i>Escherichia coli</i> , <i>Morganella morganii</i> , <i>Proteus</i> species, <i>Pseudomonas aeruginosa</i> , <i>Stenotrophomonas maltophilia</i>	<i>Pseudomonas aeruginosa</i>	-	1	
<i>Haemophilus influenzae</i> , <i>Klebsiella pneumoniae</i> , <i>Klebsiella variicola</i> , <i>Proteus</i> species, <i>Staphylococcus aureus</i>	<i>Haemophilus influenzae</i> , <i>Klebsiella pneumoniae</i> , <i>Proteus</i> species, <i>Staphylococcus aureus</i>	-	1	
<i>Haemophilus influenzae</i> , <i>Klebsiella pneumoniae</i> , <i>Moraxella catarrhalis</i> , <i>Pneumocystis jirovecii</i> , <i>Serratia marcescens</i>	<i>Serratia marcescens</i>	-	1	
<i>Acinetobacter</i> species, <i>Escherichia coli</i> , <i>Klebsiella pneumoniae</i> , <i>Proteus</i> species, <i>Pseudomonas aeruginosa</i> , <i>Staphylococcus aureus</i>	<i>Klebsiella pneumoniae</i>	<i>Providencia stuartii</i>	1	
SoC Detection of Additional Microorganisms			22	2.2%
a) Unyvero Negative; SoC Positive			18	1.8%
negative	<i>Enterobacter cloacae</i> complex	-	1	
negative	<i>Enterobacter cloacae</i> complex	<i>Enterococcus</i> species	1	
negative	<i>Escherichia coli</i>	-	1	
negative	<i>Klebsiella oxytoca</i>	-	1	
negative	<i>Klebsiella pneumoniae</i>	-	2	
negative	<i>Klebsiella variicola</i>	-	1	
negative	<i>Legionella pneumophila</i>	-	1	
negative	<i>Pseudomonas aeruginosa</i>	-	3	
negative	<i>Staphylococcus aureus</i>	-	5	
negative	<i>Stenotrophomonas maltophilia</i>	-	2	

Unyvero Result	SoC Result	Additional SoC Results for Off-Panel Organisms ^a	# Cases	%
b) Unyvero and SoC positive (partially concordant)			4	0.4%
<i>Acinetobacter</i> species	<i>Acinetobacter</i> species, <i>Enterobacter cloacae</i> complex	-	1	
<i>Pseudomonas aeruginosa</i>	<i>Klebsiella pneumoniae</i> , <i>Pseudomonas aeruginosa</i>	-	1	
<i>Stenotrophomonas maltophilia</i>	<i>Haemophilus influenzae</i> , <i>Stenotrophomonas maltophilia</i>	<i>Enterococcus faecalis</i>	1	
<i>Acinetobacter</i> species, <i>Enterobacter cloacae</i> complex	<i>Acinetobacter</i> species, <i>Enterobacter cloacae</i> complex, <i>Klebsiella varicola</i>	-	1	
Unyvero and SoC Detection of Different Microorganisms			6	0.6%
a) Partially Concordant Results		-	2	0.2%
<i>Citrobacter freundii</i> , <i>Pseudomonas aeruginosa</i>	<i>Pseudomonas aeruginosa</i> , <i>Staphylococcus aureus</i>	<i>Raoultella</i> species	1	
<i>Enterobacter cloacae</i> complex, <i>Klebsiella oxytoca</i> , <i>Stenotrophomonas maltophilia</i>	<i>Enterobacter cloacae</i> complex, <i>Klebsiella pneumoniae</i>	-	1	
b) Fully Discordant Results			4	0.4%
<i>Haemophilus influenzae</i>	<i>Staphylococcus aureus</i>	-	1	
<i>Pseudomonas aeruginosa</i>	<i>Acinetobacter</i> species	-	1	
<i>Pseudomonas aeruginosa</i>	<i>Staphylococcus aureus</i>	-	1	
<i>Stenotrophomonas maltophilia</i>	<i>Enterobacter cloacae</i> complex	-	1	

^aNot listed: fungi, yeasts, diphtheroids, coagulase-negative staphylococci, α-haemolytic streptococci.

Table S5. Comparison of Reported Resistance Markers and Corresponding Hosts by Unyvero to SoC Results and AST (Prospective and Archived Studies Combined).

Unyvero Results (relevant host(s) only)	SoC Results (relevant host(s) only)	# Reported Cases	Positive Predictive Value # marker detected and resistant phenotype of isolate(s)/# marker detected
(A) Resistance to 3rd generation cephalosporins in Enterobacteriales, <i>P. aeruginosa</i> or <i>Acinetobacter</i> species			
<i>E. coli</i> , <i>bla</i> _{CTX-M}	<i>E. coli</i> , 3rd generation cephalosporin resistant	6	
<i>K. oxytoca</i> , <i>bla</i> _{CTX-M}	<i>K. oxytoca</i> , 3rd generation cephalosporin resistant	1	
<i>K. pneumoniae</i> , <i>bla</i> _{CTX-M}	<i>K. pneumoniae</i> , 3rd generation cephalosporin resistant	3	
<i>Proteus</i> species, <i>bla</i> _{CTX-M}	<i>Proteus</i> species, 3rd generation cephalosporin resistant , <i>P. aeruginosa</i> , 3rd generation cephalosporin resistant	1	12/12
<i>K. pneumoniae</i> , <i>bla</i> _{CTX-M}	<i>K. pneumoniae</i> , 3rd generation cephalosporin resistant , <i>P. aeruginosa</i> , 3rd generation cephalosporin resistant	1	
<i>K. pneumoniae</i> , <i>bla</i> _{CTX-M}	<i>K. pneumoniae</i> , 3rd generation cephalosporin resistant , <i>P. aeruginosa</i> , 3rd generation cephalosporin resistant	1	
<i>K. pneumoniae</i> , <i>bla</i> _{CTX-M}	<i>K. pneumoniae</i> , 3rd generation cephalosporin resistant , negative	1	-
<i>E. coli</i> , <i>P. aeruginosa</i> , <i>bla</i> _{CTX-M}	<i>E. coli</i> , 3rd generation cephalosporin resistant , negative	1	-
<i>E. coli</i> , <i>P. aeruginosa</i> , <i>bla</i> _{CTX-M}	negative, <i>P. aeruginosa</i> , no AST reported	1	-
<i>C. freundii</i> , <i>K. pneumoniae</i> , <i>bla</i> _{CTX-M}	negative, <i>K. pneumoniae</i> , 3rd generation cephalosporin resistant	1	-
<i>E. coli</i> , <i>S. marcescens</i> , <i>bla</i> _{CTX-M}	negative, negative	1	-
<i>E. coli</i> , <i>K. pneumoniae</i> , <i>P. aeruginosa</i> , <i>bla</i> _{CTX-M}	negative, <i>K. pneumoniae</i> , 3rd generation cephalosporin resistant , <i>P. aeruginosa</i> , 3rd generation cephalosporin susceptible	1	-
<i>Acinetobacter</i> species, <i>Proteus</i> species, <i>P. aeruginosa</i> , <i>bla</i> _{CTX-M}	negative, <i>Proteus</i> species, no AST reported, <i>P. aeruginosa</i> , 3rd generation cephalosporin susceptible	1	-

Unyvero Results (relevant host(s) only)	SoC Results (relevant host(s) only)	# Reported Cases	Positive Predictive Value # marker detected and resistant phenotype of isolate(s)/# marker detected
<i>Acinetobacter</i> species, <i>E. coli</i> , <i>K. pneumoniae</i> ,	negative, negative, <i>K. pneumoniae</i> , 3rd generation cephalosporin resistant,	1	-
<i>P. aeruginosa</i> ,	<i>P. aeruginosa</i> , 3rd generation cephalosporin resistant		
<i>bla</i> _{CTX-M}			
<i>E. coli</i> , <i>K. pneumoniae</i> ,	negative, <i>K. pneumoniae</i> ,		
<i>P. aeruginosa</i> ,	3 rd generation cephalosporin susceptible, <i>P. aeruginosa</i> ,	1	-
<i>S. marcescens</i> ,	3 rd generation cephalosporin susceptible, <i>S. marcescens</i> ,		
<i>bla</i> _{CTX-M}	3 rd generation cephalosporin susceptible		
<i>E. coli</i> , <i>M. morganii</i> , <i>Proteus</i> species, <i>P. aeruginosa</i> ,	negative, negative, negative, <i>P. aeruginosa</i> , no AST reported	1	-
<i>bla</i> _{CTX-M}			
<i>Acinetobacter</i> species, <i>E. coli</i> , <i>K. pneumoniae</i> ,	negative, negative, <i>K. pneumoniae</i> , 3rd generation cephalosporin resistant	1	-
<i>Proteus</i> species, <i>P. aeruginosa</i> ,	negative, negative		
<i>bla</i> _{CTX-M}			
		total	23

Unyvero Results (relevant host(s) only)	SoC Results (relevant host(s) only)	# Reported Cases	Positive Predictive Value # marker detected and resistant phenotype of isolate(s)/# marker detected
(B) Resistance to carbapenems in Enterobacteriales, <i>P. aeruginosa</i> or <i>Acinetobacter</i> species			
<i>K. pneumoniae</i> , <i>P. aeruginosa</i> , <i>bla</i> _{KPC}	<i>K. pneumoniae</i> , carbapenem resistant , <i>P. aeruginosa</i> , carbapenem resistant	1	
<i>Acinetobacter</i> species, <i>K. pneumoniae</i> , <i>bla</i> _{KPC}	<i>Acinetobacter</i> species, carbapenem susceptible, <i>K. pneumoniae</i> , carbapenem resistant	1	2/2
<i>E. cloacae</i> complex, <i>K. pneumoniae</i> , <i>P. aeruginosa</i> , <i>bla</i> _{KPC}	<i>E. cloacae</i> complex, carbapenem resistant , negative, negative	1	-
<i>Acinetobacter</i> species, <i>E. coli</i> , <i>K. pneumoniae</i> , <i>P. aeruginosa</i> , <i>bla</i> _{NDM} , <i>bla</i> _{OXA-48}	negative, negative, <i>K. pneumoniae</i> , carbapenem resistant , <i>P. aeruginosa</i> , carbapenem resistant	1	-

Unyvero Results (relevant host(s) only)	SoC Results (relevant host(s) only)	# Reported Cases	Positive Predictive Value # marker detected and resistant phenotype of isolate(s)/# marker detected
<i>Acinetobacter</i> species, <i>E. coli</i> , <i>K. pneumoniae</i> ,	<i>Acinetobacter</i> species, carbapenem sensitive, negative <i>K. pneumoniae</i> , carbapenem resistant (reported below 10 ³ CFU/mL)	1	-
<i>bla</i> _{KPC}			
<i>Proteus</i> species, <i>P. aeruginosa</i> ,	negative, <i>P. aeruginosa</i> , carbapenem resistant	1	-
<i>bla</i> _{VIM}			
<i>Acinetobacter</i> species, <i>K. pneumoniae</i> ,	negative, <i>K. pneumoniae</i> , carbapenem resistant	1	-
<i>bla</i> _{KPC}			
<i>C. freundii</i> , <i>P. aeruginosa</i> ,	<i>C. freundii</i> , AST not reported, <i>P. aeruginosa</i> , AST not reported	1	-
<i>bla</i> _{KPC}			
		total 8	

Unyvero Results (relevant host(s) only)	SoC Results (relevant host(s) only)	# Reported Cases	Positive Predictive Value # marker detected and resistant phenotype of isolate(s)/# marker detected
(C) bla_{OXA} panel markers conferring resistance to carbapenems for <i>Acinetobacter</i> species			
<i>Acinetobacter</i> species, bla _{OXA-23}	<i>Acinetobacter</i> species, carbapenem resistant	3	
<i>Acinetobacter</i> species, bla _{OXA-24}	<i>Acinetobacter</i> species, carbapenem resistant	5	8/9
<i>Acinetobacter</i> species, bla _{OXA-24}	<i>Acinetobacter</i> species, carbapenem susceptible	1	
<i>Acinetobacter</i> species, bla _{OXA-23}	<i>Acinetobacter</i> species, no AST reported	3	-
<i>Acinetobacter</i> species, bla _{OXA-58}	<i>Acinetobacter</i> species, no AST reported	1	-
<i>Acinetobacter</i> species, bla _{OXA-23}	negative	1	-
<i>Acinetobacter</i> species, bla _{OXA-24}	negative	1	-
		total 15	

Unyvero Results (relevant host(s) only)	SoC Results (relevant host(s) only)	# Reported Cases	Positive Predictive Value # marker detected and resistant phenotype of isolate(s)/# marker detected
(D) Resistance to penicillin in <i>H. influenzae</i>			
<i>H. influenzae, bla_{TEM}</i>	<i>H. influenzae, penicillin resistant</i>	17	
<i>H. influenzae, bla_{TEM}</i>	<i>H. influenzae, penicillin susceptible</i>	2	17/19
<i>H. influenzae, bla_{TEM}</i>	<i>H. influenzae, no AST reported</i>	3	-
<i>H. influenzae, bla_{TEM}</i>	negative	18	-
	total	40	

Unyvero Results (relevant host(s) only)	SoC Results (relevant host(s) only)	# Reported Cases	Positive Predictive Value # marker detected and resistant phenotype of isolate(s)/# marker detected
(E) Resistance to oxacillin (methicillin) in <i>S. aureus</i>			
<i>S. aureus, mecA</i>	<i>S. aureus, oxacillin resistant</i>	47	
<i>S. aureus, mecA</i>	<i>S. aureus, oxacillin susceptible</i>	12	47/59
<i>S. aureus, mecA</i>	<i>S. aureus, no AST reported</i>	2	-
<i>S. aureus, mecA</i>	negative	30	-
	total	91	